

What is claimed is:

1. A filtration housing for accommodating a filtration cassette, wherein the  
filtration cassette includes an axially stacked plurality of filter membrane sheets,  
5 the stacked sheets defining a stack of fluid flow chambers having multi-edged  
perimeters and disposed on opposite sides of and substantially coextensive with  
each membrane sheet, the perimeters of the membrane sheets and the chambers  
being sealed such that fluid flow between adjacent chambers must pass through  
a the membrane sheet straddled thereby; the cassette defining a plurality of feed  
10 passages communicating with alternating ones of the chambers adjacent first  
axially aligned edges thereof, a plurality of retentate passages communicating  
with the alternating chambers adjacent to second axially aligned edges thereof  
opposite to the first edges, and a plurality of filtrate passage means  
communicating with other ones of the chambers between the alternating ones  
15 thereof, the filtrate passage means entering the other chambers adjacent to either  
the first or second aligned edges, the housing comprising  
a base frame means; and  
a first and second parallel plate supported by said frame means and movable  
thereon relative to each other in directions normal thereto, the filtration cassette  
20 being retained between opposing first major surfaces of said parallel plates with  
said direction of movement thereof aligned with the axis of the membrane  
sheets; and wherein said first plate defines a first channel substantially parallel  
to and axially aligned with the first edges, a second channel substantially  
parallel to and axially aligned with the second edges, and a third channel means

including a first portion acutely oriented with respect to either of the first and second edges and a second portion substantially transversely oriented with respect thereto and extending a distance therebetween.

- 5     2.     The filtration apparatus of claim 1, wherein said a second portion of said third channel means is acutely oriented to either of the first and second edges of the cassette.
- 10     3.     The filtration apparatus of claim 2, wherein said first channel is a feed channel communicating with the feed passages, said second channel is a retentate channel communicating with the retentate passages, and said third channel means is a filtrate channel means communicating with the filtrate passage means.
- 15     4.     The filtration apparatus of claim 3, wherein said second portion is oriented acutely with respect to both said first major surface of said first plate facing said module and one of said first and second edges.
- 20     5.     The filtration apparatus of claim 1, wherein said filtrate channel means further comprises a first filtrate channel including a first portion acutely oriented to the first edge and a second portion acutely oriented thereto, and a second filtrate channel including a first portion acutely oriented to the first edge and a second portion acutely oriented thereto, said first and second filtrate channels in fluid communication through the filter cassette.

6. The filtration apparatus of claim 5, wherein said second filtrate channel portions are oriented acutely with respect to both said first major surface of said first plate facing said filtration cassette and said first and second edges.
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7. The filtration apparatus of claim 1, wherein said feed channel communicates with a port defined by one side wall of said first plate, said retentate channel communicates with a port defined by said one side wall of said first plate, and said first and second filtrate channels communicate with a filtrate port defined
- 10 by a second major surface of said first plate.
8. The filtration apparatus of claim 1, wherein said third channel means further comprises a first filtrate channel including a first portion acutely oriented to the first edge and a second portion substantially transverse thereto, and a second
- 15 filtrate channel including a first portion acutely oriented to the first edge and a second portion substantially transverse thereto, said first and second filtrate channels in fluid communication through the filter cassette.
9. The filtration apparatus of claim 8, wherein said first and second channels
- 20 further comprise a first portion substantially parallel to said first edges and another portion transverse thereto.
10. The filtration apparatus of claim 9, wherein said first channel is a feed channel communicating with the feed passages, said second channel is a retentate

channel communicating with said retentate passages, and said third channel means is a filtrate channel means communicating with said filtrate passage means.